

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 10 and includes both a Replacement Sheet and an Annotated Sheet Showing Changes. This sheet replaces the original sheet for Fig. 10.

In Fig. 10, the Vector link 1020 has been amended to clarify the relationship to the LINKTRANS 1010 showing the numerical listing 1-4, 7-9.

The amendment is simply the addition of the sequential number before each element of the vector LINK 1020 and the corrected initialisation of vector elements according to LINKTRANS 1010. This amendment should help for the comprehension of the LINK vector and the LINKTRANS field. (Note that CA, CB, ...are an hexadecimal representation of central memory addresses (pointers)).

REMARKS

Claims 12-55 are pending. The Applicant has amended claims 12-15, 17, 20, 23-30, 34, 36-44, 46-55. The offered amendments are to more clearly define the claimed invention, and place the case in condition for allowance. Alternatively, the offered amendments present the rejected claims in better form for consideration on appeal. Therefore, it is appropriate that the Examiner enter all the offered amendments into this application at this time. Rule 116(a); MPEP 714.12, 714.13. Reconsideration of this application and allowance of all pending claims is respectfully requested.

Applicant thanks the Office for entering Amendment C filed after the final rejection on October 25, 2004 and Amendment D filed with the RCE on Jan. 21, 2005.

Claims Rejections - 35 USC §102(b)

The Office rejected claims 12, 13, 15-17, 20-43 and 48-55 under 35 U.S.C. 102(b) as being anticipated by Peachtree ("Peachtree Using General Ledger", copyright 1989 by Peachtree Software). A rejection based on anticipation requires that a single reference teach every element of the claim (MPEP § 2131). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Or stated in another way, a "claim is anticipated only if each and every element as set forth in the claim is found, . . . described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The Office alleges that Peachtree teaches receiving 'accounting data' from an accounting system, wherein the 'accounting data' includes trial balance data having a number of accounts wherein each account has a corresponding account balance resulting from one or more transactions and each transaction is associated with more than one account and combines at least one debit and at least one credit.

The Office thus believes that the present invention is an accounting system like Peachtree, and thus importing of Peachtree data within Peachtree anticipates the presently claimed elements. Essentially, the Office then recites the elements of the claimed invention and tries to equate the claimed elements to features of Peachtree. As detailed herein, this comparison and equation fails.

Peachtree is a bookkeeping software product allowing the creation and maintenance of a chart of accounts, the entering of transactions, and the printing of reports - one step after the other. The 'Balance Sheet' report and the 'Income Statement' report printed by Peachtree and identified as "financial statements" are only the result of the controlled sequential printing of this master list of accounts with account balances (the trial balance) along with the addition of sequential fictional accounts.

As noted in Peachtree B1-B3, the structure of Peachtree is based upon the setup of the Chart of Accounts which includes account number, description, type, category, Group End value, and Balance column (see Peachtree 4-8). As noted by the Office on page 11 and 12 of the Office action, the Chart of Accounts is the master list of all Accounts by which Peachtree operates, as well as other accounting systems.

Peachtree thus requires a pre-defined chart of accounts in order to function. Any data that is imported within Peachtree requires the structure according to the established Chart of Accounts in order to be processed. Typically, the user builds the Chart of Account and creates the structure (see Peachtree Chapter 3, Chapter 4 and the Setup Forms A1-A5). It is NOT possible for Peachtree to receive an electronic file of accounting data having only an account and amount as Peachtree would not be able to process this information. The present invention does not require a pre-defined chart of accounts.

As detailed in the present invention, the electronic file is used to compute the financial statements. An account balance is computed for each account, wherein each account has one or more amounts with a corresponding direction, such as a credit or debit. There are no "amounts" in the Peachtree Chart of Accounts - only the account features (see Peachtree 4-8). Even if Peachtree were to access an electronic file having trial balance data, it would not be able to process such data due to the Peachtree constraints (see Peachtree 3-21).

As noted herein, the present invention receives an electronic file of accounting data having a plurality of accounts, wherein each account has a corresponding amount. Such an electronic file of accounting data can originate from a number of resources, including, but not limited to: from a Print command of software program; from an export or 'save as' function of a software program; from a scanning process that may include optical character recognition (OCR); and from manually entered data saved into an electronic format. As further noted in Claim 20, the accounting data can be obtained from reading trial balance data (accounts and respective balance) stored on a computer readable medium and/or reading transactions such as Peachtree table 2-18 stored on a computer readable medium, wherein the term 'computer readable medium' is given the broad definition as known to those in the industry. With either reading trial balance data or reading transactions, the present invention can build financial statements and display details. And, the accounting data being obtained from a universal process, such as a Print command of a trial balance and/or transactions, is unique to the present invention.

Regardless of where or how the electronic file was generated - it contains 'accounting data' having a plurality of accounts, wherein each account has a corresponding amount and direction as noted herein. As will become readily apparent in the discussion herein, the rigid framework employed by Peachtree is unable to process such an electronic file of accounting data. For example, the Office uses the Peachtree table on 2-18 (re-created herein below) with respect to journal entries to show an account with an amount and direction (credit or debit). However, while the present invention can receive this data in an electronic format and process

the data – Peachtree cannot because Peachtree requires the prior setup of the Chart of accounts and the ensuing constraints (see Peachtree 2-18, 2-19).

The Office further alleges that Peachtree encompasses ‘receiving data’ which includes manual entry as well as stating that this “method imports the information from other modules.” The claims have been amended to clarify that the ‘accounting data’ is received in an electronic format or file, and thus traverses the rejection based on manual entry.

With respect to the Peachtree importation limitations, the Transfer of Summary Journal is described beginning on pages 7-16 of the Peachtree cited reference. The Peachtree Transfer is simply a mechanism to post the journal entries to the general ledger accounts. “This program lets you take summary journals produced by other PCIII modules and transfer their figures into the General Ledger. You can transfer summary journals from Payroll, Accounts payable, Accounts Receivable, and Fixed Assets.” (Peachtree page 7-16) The PCIII modules are briefly mentioned in the Preface (Peachtree i) and there are actually several PCIII modules that send information to the General Ledger as noted therein. These modules are essentially Peachtree ‘special journals’ used to register transactions. Peachtree requires the accounting data to be handled in a rigid framework and the data fields and structures are intricately woven into the system which provides tight control and limits flexibility.

The Office refers to Peachtree 2-18 table which illustrates the entry screen for journal entries and further references Peachtree 8-9 to 8-11 and states that “Peachtree teaches that this received (either manually or through the Transfer of Summary Journal) accounting data is in fact trial balance data.”

For clarification, a trial balance, in general, is a report showing a chart of accounts with account balances (trial balance data) at a given time. The account balance is the result of transactions as is known. In an accounting system, the trial balance data is accounting data - but accounting data is technically not, in fact, trial balance data as set forth by the Office.

As noted, Peachtree is a bookkeeping software allowing the creation and maintenance of a chart of accounts, the entering of transactions, and the printing of reports - one step after the other. Following the setup procedures described in the Peachtree reference as further supported by the materials of Peachtree Appendix A and Appendix B, the trial balance data is the result of the bookkeeping process as used by accounting systems. Peachtree details the manual entry into its system and the manipulation of that data within the confines of the Peachtree software. In other words, the manually entered trial balance data has to be entered according to the Peachtree requirements such as sequence of accounts, numbering of accounts and account ranges in order to derive the trial balance presentation.

For at least these reasons, a rejection based upon anticipation is traversed as the Peachtree does not teach each and every element of the claims.

The Office also states that Peachtree describes grouping of the accounts in a manner similar to the present invention. Peachtree describes the General Ledger and the types of typical General Ledger tasks in Peachtree 1-5, 1-6, along with the General Ledger transaction options. Peachtree Sec 2 also provides an example illustrating some maintenance activities with the General Ledger.

Amended Claim 12 currently recites “grouping the accounts into one or more financial statement items, wherein each account is associated with only one financial statement item within any one financial statement and wherein said grouping is regardless of an account sequence.” Peachtree operates according to the account sequence and does not permit ‘ranges’ that are out of sequence. In addition, as detailed herein, Peachtree sequentially follows the account sequence in the Chart of Accounts in Peachtree B1-B3 in the manner in which Peachtree prints out the “Balance Sheet” and “Income Statement” Reports.

The Office refers to the Peachtree table on 2-18 which is re-created below for reference:

Ref #	Description	Acct #	Amount	Cr/Dr
1408	11/89 Service charges	54000	43.50	Debit
1409	11/89 Service charges	11000	-43.50	Credit
1410	Returned ck. #38456	64000	147.56	Debit
1411	Returned ck. #38456	11000	-147.56	Credit

The Office states that the Expense Account and the Asset account are financial statement items and that “the roll up of Accounts 54000 and 64000 as ‘Expense’ represents grouping the two accounts into a financial statement.” (Office Action page 4). This is incorrect, as ‘Expenses’ is a category of items as presented in Peachtree B-6 and do not have any respective balance.

It is important to understand the terminology of the present invention as it aids in understanding the invention. A prior description in Amendment C dated Oct. 25, 2004 included the following useful description which is recited herein for reference:

In particular, the Applicant noted the widely accepted definitions for the following terms of art:

An “account” is a grouping of transactions (debits and credits) that determine the net balance of the account;

A “chart of accounts” is a list of accounts;

A “trial balance” is a list of accounts with respective balances, where the balances result from the bookkeeping process of recording of transactions into accounts (a trial balance is not a financial statement);

A “financial statement item” is a group of accounts; and

A “financial statement” is one of a balance sheet, income statement, statement of retained earnings, or a cash flow statement (a similar four types of financial statements exist for “not-for-profit” organizations as well).

In Amendment D, the Applicant set forth a useful presentation of the hierarchical structure: “The hierarchal levels of data are as follows:

Debits and Credits (which are amounts related to an economic event such as the sale of goods) provide one level of data, and come in combinations (e.g., Debit-Credit or Debit-Credit-Credit or Debit-Debit-Credit, etc) in accordance with the double entry accounting principle;

A Transaction (which is an economic event that can be recorded using a Journal Entry) provides a next level of data, and includes a combination of Debits and Credits (note that, in accordance with the double entry accounting principle, the net balance of a Journal entry is zero);

An Account provides a next level of data, and is a group of Debits and/or Credits from Transactions that determine the net balance of the account;

A Financial Statement Item provides a next level of data, and is a group of Accounts that determine the net balance of the Financial Statement Item; and

A Total of Financial Statement Items provides a next level of data, and is a group of Financial Statement Items that determine the net balance of the Total.”

As noted in the prior responses, these definitions were presented and it was explained that there is a hierarchical level for the data. With respect to Peachtree, title accounts (Peachtree 4-29 Step 7 and TYP1 accounts in B1-B3) are shown in Peachtree B4-B5 – Assets, Current Assets, Fixed Assets, Other Assets, Liabilities & Equity, Current Liabilities, Long Term Liabilities, and Stockholders Equity are not financial statement items. A financial statement item is a group of accounts that determine the net balance of the Financial Statement Item, wherein an account is a grouping of transactions (debits and credits) that

determine the net balance of the account. The Income, Cost of Goods, Expenses, Other Income, and Other Expenses noted in B-6, B-7 are also not Financial Statement items as they have no respective balances.

Peachtree provides accounts of the Chart of Accounts along with balances in its “Balance Sheet” and “Income Statement” Reports. As detailed herein, Peachtree is not able to perform the grouping function as described and claimed in the present application that performs grouping regardless of the account sequence. Peachtree operates sequentially with respect to the Chart of Accounts referenced in Peachtree B1-B3. Peachtree operates by sequentially stepping through the chart of accounts with printing control to display the titles and adding account balances of certain ranges of the account sequences.

As observed by Office, the Chart of Accounts is the master list of all Accounts by which Peachtree operates, and the ‘Balance Sheet’ report and the ‘Income Statement’ report printed by Peachtree and identified as “financial statements” are only the result of the controlled sequential printing of this master list of accounts with account balances (the trial balance) along with the addition of sequential fictional accounts.

As noted in Peachtree 8-13, General Ledger lists accounts in numerical order on this report and reflects Balance Sheet subtotals and totals as established in the Chart of Accounts. The Trial Balance report also shows balances for these accounts.

Looking at the Chart of accounts on page B-1 to B-3, the accounts are in ascending order of their account numbers starting from account 100 to 999. As noted in Peachtree, there is a distinction between Balance Sheet account and Income Statement account (Peachtree 4-28, 4-30, 4-32, 4-33) and a segregation in two parts is made for the Chart of Accounts to allow the sequential printing of the Balance Sheet accounts in the ‘Balance Sheet’

report and the sequential printing of the Income Statement accounts in the 'Income Statement' report.

To simulate the presentation of financial statements, Peachtree adds temporary accounts: title accounts (type 1), Master/Department Control accounts (M/D), subtotals accounts (type 3-8) and totals accounts (type 9). The Office refers to these as temporary accounts. These fictional accounts are added permanently to the Chart of Accounts and are not able to be edited as "you can not make journal entries to them. "(Peachtree 4-29, 4-24, 4-31). As expressly stated by Peachtree, the two financial reports of Peachtree are simply the printing of accounts:

If you want to see how General Ledger uses Titles accounts, look at the Balance Sheet printed in Appendix B, Standard Chart of Accounts and Financial Statements. Compare it to the standard Chart of Accounts in the same appendix. Find the type 1 (title) accounts on the Chart of Accounts and see where those titles appear on the Balance Sheet. Remember that the titles you see here are the same ones that General Ledger automatically supplies when you create a standard Chart of Accounts. (Peachtree 4-29)

Again, Peachtree simply lists accounts in numerical sequential order on this report as established in the Chart of Accounts, and while printing, Peachtree performs certain printing controls to add certain ranges as designated by the Master accounts. Peachtree therefore teaches the use of accumulators for specific range of consecutive accounts and each Master Control account subtotals the accounts numbered higher than itself and lower or equal to the Group End number (Peachtree 4-24).

For example, as shown in Peachtree B-1, Account number 105 is Cash and is a Master account that forms a sequential accumulative range from account 105 through 119, the group end. Thus, Account 110 'Cash – Operating' and Account 115 'Cash on Hand' are added to the Account 105 Cash amount.

Peachtree does not allow for the grouping of the accounts into one or more financial statement items, wherein each account is associated with only one financial statement item within any one financial statement and wherein said grouping is regardless of an account sequence. For at least these reasons, the rejection is traversed.

The Office also alleges that Peachtree groups the financial statement items into one or more totals wherein each total is based on preceding financial statement item balances. As described herein, Peachtree operates sequentially in the formation of 'ranges' according to the Chart of Accounts in order to print the financial statement reports, namely the Balance Sheet and Income Statement.

The present invention processes financial statement items, balances and total balances as noted in claim 12, "computing a financial statement item balance for each financial statement item based on the associated accounts and their respective account balances; grouping the financial statement items into one or more totals, wherein each total is based on preceding financial statement item balances; and providing a financial statement that includes each financial statement item and its respective balance."

In more particular detail, as noted in Peachtree B-1, the subtotal is Type 4 and accumulates all sequentially preceding Type 2 accounts. For example, Account 140 - 'Total Current Assets' would accumulate all the accounts in the preceding sequential range from 105 to 140. Such a process does not allow non-sequential accumulation which is provided by the present invention that allows for the grouping of the financial statement items in a manner irrespective of the sequence. In fact, the present invention allows grouping of any accounts regardless of the sequence or account identification such as account number/account title.

As detailed in Peachtree 4-31, when General Ledger encounters the Type 3 through 8 accounts as it prints financial statements, it prints the accumulated total of preceding type 2 accounts, and the contents of the accumulator identified by the type number is printed and

then reset to zero. In Peachtree, the General ledger clears the subtotals maintained by account types 3 through 8 each time one of these accounts is used. When General Ledger encounters the Type 9 accounts as it prints financial statements, it prints the accumulated total of preceding type 2 accounts, and the contents of the accumulator identified by the type number is printed and not reset to zero, as the Total account values are never cleared to zero since Total accounts act like running totals. (See Peachtree 4-33 item 2.) No grouping process exists in Peachtree – simply a printing process.

As described in the present application, there is a “distinction between two types of balances (financial statement items and totals) appearing on a financial statement; enabling the user to group the accounts into financial statement items simply and rapidly, by pointing, through the data structures and the display module; enabling the user to group the financial statement items into totals simply and rapidly, by pointing, through the data structures and the display module, and considering that any total in a financial statement comes from balances of preceding lines.” (Claim 1 Published Patent Application US 2001/0044762 A1)

The sequential processing of Peachtree does not provide for the claimed elements and for at least these reasons, the rejection is traversed.

With respect to the levels of detail noted in amended claims 13, 15, 17, the Office alleges that Peachtree provides such a capability. However, Peachtree does not allow for the breakdown levels of detail for the grouping in a non-sequential manner. Furthermore, the amended claims include the levels of detail from a display of the financial statement. The levels of detail according to the present invention are obtained directly from the display of the financial statement. Peachtree has no such capability.

As expressed in the background section of the present application, accounting systems usually output a project of a financial statement which is typically used only by the directors. The user must respect a rigid framework which is pre-established, fixed and limited to one

type of presentation, often the statement of results or the balance sheet, without the complementary notes (which are an integral part of financial statements) and the additional information. Also, the consultation of these financial statements on the screen is limited to the report itself and the user cannot go back to find the source of the information. The present invention allows the user to navigate from the financial statement information displayed to the user and provides the ability to quickly locate additional information in the first, second and third levels of detail. For at least these reasons, this rejection of Claims 13-17 is traversed.

The Office states that Peachtree is capable of receiving accounting data by reading trial balance data stored on a computer readable medium and/or reading transaction stored on a computer readable medium. However, Peachtree, like most complex software, has specific data arrangements and does not permit easy importation or receiving of data fields such as accounting data. As articulated herein, the importation of data within Peachtree modules is limited. Peachtree does not allow importing of data in any format with the exception of backup Peachtree data or the internal transfer of journal entries. Thus, Peachtree describes a transfer of certain data between internal Peachtree modules but not an electronic file of accounting data having a plurality of accounts, wherein each account has a corresponding amount.

By way of further illustration of one embodiment, the present invention can receive an electronic file, such as an ASCII file that can be easily generated by a Print command, and process the data. Furthermore, data from Peachtree can even be saved as an ASCII file and used by the present invention. BUT, that same ASCII file generated by Peachtree CANNOT even be input back to Peachtree. Therefore, Peachtree does NOT "import" accounting data from other modules or provide for later retrieval of such accounting data by reading trial balance data stored on a computer readable medium and/or reading transaction stored on a computer readable medium. For at least these reasons, Claim 20 is traversed.

A further aspect of the present invention includes the integration of the method claimed herein, wherein the method is integrated into accounting software (Claim 21) and/or a word processor, spreadsheet or editing system (Claim 22). It should be noted that at the time of the invention, editing software was considered to be those products such as Adobe Pagemaker or QuarkExpress in the field of what is now generally termed desktop publishing.

The Office states that Peachtree is accounting software and alleges all the claimed features are taught by Peachtree and thus integrated into accounting software. As argued herein – Peachtree does not teach the methods of the present invention and although the functionality of the present invention may be incorporated into Peachtree – such functionality does not presently exist. Likewise, the Office states that Peachtree represents ‘editing software’ and allows one to ‘tailor’ the general ledger. Claim 22 reflects that the present invention can be integrated into any word processor software, spreadsheet software, and/or editing software. Peachtree CANNOT be integrated into any word processor, spreadsheet software and/or editing software as it exists unto itself.

The Office alleges that Peachtree displays financial statement with detail associated with any financial statement item balance. The amended claims more clearly define the present invention components such as pointers (central memory addresses), doubly linked data structures, and doubly linked list/sub-list of pointers. This makes it easier to distinguish the present invention as it allows consulting a financial statement on the screen, and to rapidly go back to the source of the financial statement items balances presented in a financial statement built using the method taught by the Financial Statement Module, as claimed at claim 23.

The direct access provided by the sub-lists of electronic addresses, that is the sub-lists of trial balance data structure element pointers 1014 linked to financial statement data structure elements and the sub-lists of displayline data structure element pointers 1030 linked to trial balance data structure elements: While consulting the report of a financial statement of which an example is shown at FIG. 18, the user can select a line and obtain detailed

information 208. The first level of detail is the detail of an item 1901 which is obtained by inserting, in the display structure 1401 and in the list of pointers 1409 an element 1417 for each element in the sub-list item 1014 of the item selected. The present invention saves the pointer of the chart structure 1011 of each element in the display structure 1418 and displays the modified report 1900. The user can manipulate the display and print the document or select a balance to obtain the detail of this balance. (see present Specification lines 7-14 page 30)

The detail of a balance is obtained by going through the sub-list of display structure pointers 1030 from the pointer to the display line of the first transaction 1027 until the pointer to the display line of the last transaction 1028 linked to the account of the chart structure corresponding to the pointer of the chart structure stored in the display structure 1418 of the line selected. For each element of the sub-list, a similar element is created and inserted in a distinct list of display structure pointers as in 1409 to assemble a report as shown in FIG. 20 containing the list of transactions comprised in the balance of the account. The display structure pointer for each element of the distinct list is initialized to the one contained by the element of the sub-list. (see present Specification line 29 page 36 – line 7 page 37)

To finish the list of transactions, a last line composed of a page jump 1406 is added to the list. The module stores the pointer to the first element 1407 and the pointer to the last element 1408 of this list 1402. The list then goes through the skeleton of reports of FIG. 16 to build a report to display and print by adding headers and page jumps inside of the list of the display structure. The user can manipulate the display, print the document of FIG. 20, come back to the previous detail level, or select a transaction to obtain the details, that is, the detail document which lists the transactions which compose this document as shown in FIG. 21.(see present Specification, lines 6-13 on page 40)

FIG. 21 shows the presentation of the detail of a document. In this case, the transaction structure has been optimized. In the other case, the presentation would be of the type of FIG.

24, with the Debit and Credit columns. (see lines 15-17 on page 40 of the present Specification)

The module looks in the transaction structure 2201, for the first transaction and the last transaction which build this document, that is, the transactions having the same date and the same document number, starting from the transaction pointer saved in the display line 2218. The module then builds a distinct list of display pointers from the display line pointers saved in the transaction structure 2211 (line 19-23 on page 40)

Claims 13, 15, 17, and 23 have been amended in accordance to more clearly define the invention and the rejections are traversed for at least the reasons set forth herein.

One of the further amendments is related to the identification of the 'memory' indicated in the claims. According to the Specification of the application, the claims are referring to the central memory of a computer. Consequently, the claims are amended to change 'memory' for 'central memory' for clarity. Unlike Peachtree and other systems that write/read to/from a hard drive or external memory, the present invention performs processing of the accounting data in the central memory, for example RAM.

The Office makes additional allegations and rejections with respect to 'doubly linked structures' and 'dynamically allocating memory spaces'. According to the Specification of the present application, dynamically allocating memory spaces refers to the process of allocating a memory space for each data structure element, on a one by one basis, as needed, in the central memory of the computer. It also means reallocating the central memory space of an element when this element is deleted (removed) from the data. Claim 24 is consequently amended to clarify the understanding of the individual dynamic allocation in the central memory of the computer. Most accounting system software uses external memory, a mechanical process, and accesses a hard drive to operate. The present invention uses the electronic central memory, no mechanical process, to allow for fast accounting data processing.

Also, as observed starting from page 11 of the Office Action, the definition of ‘doubly linked data structure’ referred to in the claims defines how elements of a data structure are linked together to form a data structure, and not how elements of different data structures can be linked. ‘Doubly linked’ means that each data structure element is linked to the next element (first link) and to the previous element (second link) by storing the address of these next and previous elements. Claim 24 has been amended to clarify the present invention to refer to ‘doubly linked data structure’.

A further clarification is provided with respect to ‘pointers’, to eliminate any ambiguity such as (account numbers) being interpreted as pointers (see page 12 of the Office Action). The pointers in the present invention are central memory addresses returned by the memory allocation function. Since the present invention dynamically allocates a central memory space on a one by one basis for each individual element of a data structure and since the return value of a memory allocation function is a pointer (the central memory address of an available central memory space allocated) the data structures are “doubly linked” by using the insertion algorithm of Table 1 in the specification to store the ‘NEXT’ and ‘PREVIOUS’ data structure element pointers in the current data structure element, that is the central memory address of the next element in the data structure and the central memory address of the previous element in the data structure, which pointers (central memory addresses) are function of available central memory spaces at allocation time, so pointers are in random order rather than in a sequential order.

These amendments to claim 24, referring to ‘central memory’, providing the individual dynamic allocation of central memory spaces, identifying ‘pointer’ as a central memory address and, defining ‘doubly linked data structure’ by how the data structure elements are linked together with pointer ‘next’ and ‘previous’ to form a data structure, should eliminate any possible comparison as a “*check number*” used as a Ref# in Peachtree (7-5) being a

memory address of a particular element in the trial balance (chart of accounts) data structure (page 14 of the Office Action).

Using these pointers, you can go through the data structure sequentially starting from the central memory address of the first element of the data structure and move to the central memory address of the next elements until the last element, or, being 'doubly linked', you can go through this data structure sequentially the other way, starting from the central memory address of the last element of the data structure and move to the central memory address of the previous elements until the first element of the data structure. Once again, Applicant wishes to reiterate that the present invention processes of the accounting data are performed in the central memory and not an external hard drive with respect to this feature of claim 24.

Since new element can be inserted anywhere in the data structure, no matter what central memory address is available, the process of individual memory allocation space combined with the doubly linked data structure offers great flexibility for organizing and manipulating the accounting data, and fast speed process considering the use of central memory addresses (pointers) providing electronic access, with no mechanical process, to the accounting data.

For illustrative purposes, Applicant refers to Figure 10 element 1030 to present a detailed explanation of an addition of a structure element using the algorithm of Table 1, by initializing a new data structure element (allocated central memory address: GD) pointers NEXT (GC) and PREVIOUS (GB) along with the NEXT pointer of the previous element and the PREVIOUS pointer of the next element.

	Next	Previous	pointer
GA	GB	X	
GB	GC	GA	
GC	X	GB	

	Next	Previous	pointer
GA	GB	X	
GB	GD	GA	
GD	GC	GB	
GC	X	GD	

An example of this flexibility is for the addition of a new account in the chart of account. A new account can be inserted anywhere in the chart of accounts without ‘disturbing’ the other accounts, and working with pointers and doubly linked list of pointers, the account number is not used or required as an index, contrary to most accounting software such as Peachtree (see examples of constraints imposed by accounting software for account numbers on page 3-21 to 3-24 in Peachtree).

Knowing that financial statement items are groups of accounts, and knowing that elements of the trial balance data structure needed to be ‘doubly linked’ for more than one purpose, instead of storing the ‘NEXT’ and ‘PREVIOUS’ pointers in each trial balance data structure element, as specified in claim 25 the present invention uses distinct doubly linked lists of trial balance data structure element pointers illustrated in Figure 5 of the present application such as 501 for the Chart of Accounts, and such as 505 for the grouping of accounts into financial statement items to ‘doubly link’ the elements of the trial balance data structure as needed.

Here the flexibility is even more evident since modifying the grouping for financial statement item will not affect the Chart of Accounts and modifying the Chart of Accounts (the

sequence of the accounts, account numbers, addition of new accounts, etc.) will not affect the grouping for financial statement item.

Claims 25, 40, 48, 54-55 are amended herein to specify the type of sub-lists, being sub-lists of pointers, and claims 29 and 30 are amended to clarify the type of pointers and to indicate that a sub-list is simply a list in a list. For at least the reasons presented herein, the rejections are traversed.

A notable distinction refers to the use of central memory recited in claim 25, wherein the present invention does not employ external drives as is further described herein. Peachtree stores data onto hard drives and access is to/from the hard drive. For the other part of the accounting data, the transactions, the present invention also use the central memory allocation functions that return pointers (central memory addresses) to dynamically allocate individual central memory spaces for each transactions at available central memory spaces.

As for the elements of the trial balance data structure that are 'doubly linked' for more than one purpose, knowing that doubly linking for more than one purpose could be useful for transactions, the present invention uses doubly linked lists of pointers, and displayline data structure element pointers, to 'doubly link' these transactions elements as needed, allowing the building of different lists of pointers for various type of transactions reports.

Also, knowing that sub-list is a list linked to an element of another list, such as shown in Figure 5, element 505 is linked to an element of the financial statement data structure, the present invention uses sub-lists 1030 of displayline data structure element pointers to link lists of transactions associated with a particular allocation account, which simply requires that the central memory address of the first element of this list 1030 be stored in the associated trial balance data structure element 1027, as for the last element 1028 the list 1030 being doubly linked. (see lines 6-11 on page 34 of present Specification).

Claims 36-38 are amended to clarify the identification of the pointers from 'display line structure element' to 'displayline data structure element'. Claim 38 is also amended to indicate that a sub-list is simply a list in a list.

The unique accounting data organisation in the central memory of a computer could be void each time the computer is turned off, so a save on an external memory, such as a disk for example, must be performed before the computer is turned off. But the pointers (central memory addresses) returned by the memory allocation functions used for the dynamic allocation of individual central memory spaces at available memory addresses can not be save on external memory. To rebuild the distinct lists of trial balance data structure element pointers, the present invention use a vector (a sequential data structure) called the LINK vector that stores the central memory addresses (pointers) of the individual allocated memory spaces for the trial balance data structure elements.

When the elements of the trial balance data structure are reloaded in the central memory by the invention, using the memory allocation functions to allocate central memory spaces on a one by one basis, for each trial balance data structure element at the then available central memory spaces, the new pointers (central memory addresses) returned by the memory allocation functions will be stored in the LINK vector and the doubly linked lists of pointers grouping the accounts into financial statement items will be rebuilt using theses new pointers stored in the vector according to the vector element sequential number stored in the trial balance data structure in a field called LINKTRANS which sequential number was saved in the trial balance file (1201 in Figure 12) and in the financial statement file (1301, 1302, 1303 in Figure 13) (see lines 14-19 on page 19 of the present Specification).

Claims 26, 41 and 49 are amended to precisely define the components of the LINK vector and the LINKTRANS field, which field in the trial balance data structure stores the

sequence number of the creation of the account. For at least the reasons presented herein, the rejections presented herein are traversed.

Amended Figure 10 of the present application includes the addition of the sequential number before each element of the vector LINK 1020 and the corrected initialisation of vector elements according to LINKTRANS 1010. This amendment should help for the comprehension of the LINK vector and the LINKTRANS field. (Note that CA, CB, ...are an hexadecimal representation of central memory addresses (pointers)).

This concept is used to rebuild the sub-lists of pointers 1030, doubly linking transactions associated with a particular allocation account. The present invention uses the LINK vector and the LINK vector element sequential number stored in the LINKCHART field of the transaction data structure to access the sub-list addresses 1027-1028 of the associated allocation account thru its new pointer (central memory address) stored in the LINK vector by the reload process.

Claims 34 and 51 are amended herein to more clearly define the components of the LINK vector and the LINKCHART field and for at least these reasons the rejection is traversed.

A similar concept is used when a debited account and a corresponding credited account are stored in a single element. The present invention uses the LINKBANK field to access the sub-list of the other associated account in the same way it uses the LINKCHART field, so the single element will be part of two doubly linked sub-lists (Fig. 10 – element 1030), and are linked to two accounts.

The Office also rejects claims 27, 28, 39, 42, 48, 53 and 55 by alleging that Peachtree teaches storing financial statement elements into a financial statement data structure as noted

in Peachtree B1-B3. However, Peachtree only describes the chart of accounts – there is no distinct financial statement data structures articulated in Peachtree. The Peachtree table B1 has a “TYP” that refers to the type of accounts for the Chart of Accounts – this is not the LINE type associated with the financial statement data structure of the present invention. As explained in the present application there are two types of balances provided in a financial statement, namely a financial statement item balance and a total balance. For at least these reasons, the rejection is traversed. These claims, including amended claim 28, indicate that there are two types of balances provided in the financial statement.

The Applicant’s claims define a method or computer program product for use in building financial statements that allows the reading of any trial balance data and/or transactions, and the displaying of balance detail. Peachtree is a bookkeeping software product allowing the creation and maintenance of a chart of accounts, the entering of transactions, and the printing of reports.

The Office alleges that Peachtree maintains a direction field in the trial balance structure as claimed in claim 31. Peachtree does not disclose or describe maintaining a direction field in the trial balance data structure for each account. The Cr/Dr column of the Table on page 2-18 represents a direction field for each transaction amount, not a direction field for each account. This Table illustrates the entry screen for journal entries and this does not allow enabling a user to identify a transaction amount’s effect on the corresponding account balance because the user does not see the accounting direction of the corresponding account, therefore, the user can not see if the transaction’s amount increase or decrease the account balance.

As is well known in accounting, the notions of addition and subtraction and of positive or negative totals are slightly changed. There are debit balances and credit balances which are increased or decreased by debiting or crediting amounts. Therefore, a debiting balance is increased by debiting an amount and is decreased by crediting an amount. A credit balance is

increased by crediting an amount and decreased by debiting an amount. (see lines 18-23 on page 20 of the present Specification)

Table of page 2-18 shows that when a negative number is enter, Peachtree put 'Cr' on the entry screen, and put 'Dr' if the number is positive. The Cr/Dr field does not represent Applicants Journal field (claim 35). Peachtree Tables 2-18, 8-8, 8-11 and 8-14 ('Allowance for Bad Debts' and 'Accumulated Depreciation' accounts) show clearly the direct correlation made by Peachtree, as for accounting software, between the mathematic sign of the number and the accounting direction of the transaction amount:

negative number = credit amount

positive number = debit amount

so, the direction of each transaction is simply indicated by the mathematic sign of the number. This is clearly put in evidence by Table on Peachtree page 8-11 where for the account '130 Allowance for Bad Debts' you see a beginning credit balance of ' 51,447.50 - ' being increased with a transaction credit amount of ' 3,500.00 - ' for an ending credit balance of ' 54,947.50 - ', which is the account balance printed with the account 'Allowance for Bad Debts' in the 'Balance Sheet' report of page 8-14.

The same conclusion is observed with the account '160 Accumulated Depreciation' for which you see on page 8-11 a beginning credit balance of ' 454,940.66 - ' being increased with a transaction credit amount of ' 15,679.09 - ' for an ending credit balance of ' 470,619.75 - ', which is the account balance printed with the account 'Accumulated Depreciation' in the 'Balance Sheet' report of page 8-14.

There is no Journal field such as for the present invention, where each transaction amount is stored as a positive number in the transaction structure, to indicate the accounting direction of each transaction amount (see present Specification, line 30 page 33 to line 4 page 34) and when optimized (one transaction line for the debit and the credit), the accounting

direction of the same transaction amount will vary, according to the Journal field (see lines 23-27 page 36 of the present Specification) and, there is no direction field maintained for each account. For at least these reasons the rejection of claims is traversed.

As detailed herein, the amended claims and the arguments herein overcome the rejections and allowance of all claims is respectfully requested.

Claim Rejections – 35 USC § 103

The Office has quoted the statute from 35 USC 103(a), which is referenced herein. The Office has rejected claim 14 and 18 – 19 as being unpatentable over Peachtree in view of Official Notice and claims 44 – 47 as being unpatentable over Peachtree in view of Sampson (U.S. Pat. No. 5,390,113). Applicant has carefully considered the Office rejections and respectfully submits that the amended claims, as supported by the arguments herein, are distinguishable from the cited reference.

According to the MPEP §2143.01, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art."

A useful presentation for the proper standard for determining obviousness under 35 USC §103(a) can be illustrated as follows:

1. Determining the scope and contents of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

Claims 14 and 18-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Peachtree and in view of an Official Notice. The Applicant has considered

this rejection and traverses this rejection as detailed herein and allowance of the claims is respectfully requested.

The Office alleges that Peachtree provides a direction for the account. Whether it is with a minus sign or with parenthesis, Peachtree simply teaches identifying credit transaction amount and credit account balances with such sign, not if direction is opposite to assigned accounting direction. The Tables on pages 2-18, 8-8, 8-11 and 8-14 clearly show that Peachtree makes a direct correlation between the mathematic sign of the number and the accounting direction of the transaction amount:

negative number	=	credit amount
positive number	=	debit amount

so, the direction of each transaction is simply indicated by the mathematic sign of the number, and consequently the account balance with a minus sign to its right indicates a credit balance.

As taught by the present invention, the direction field maintained in the chart structure of the Financial Statement Module has several purposes. One is to enable a user to identify a transaction amount's effect on the corresponding account balance while consulting the account balance detail (2nd level of detail - Figure 20 -claim 15). In Figure 20 of the present application, in addition to indicating the direction D for debit or C for credit for the transaction 2003 in the presentation, the financial statement module displays a "+" 2004 or a "-" according to the direction of the account 1029 to facilitate the comprehension of the effect of the transaction on the balance of the account. The direction of the account shown 2005 is attributed during the building of the chart structure 304 from the accounting data and can be modified by the user in the data entry screen of the trial balance 305. As explained herein, with the accounting equation of Figure 15, a transaction debiting an account for which the direction is debit displays a "+". As well, a transaction crediting an account for which the direction is credit displays a "+". A "-" is displayed when the direction of the transaction is different from the direction of the account, for example, in the case of a transaction crediting

an account for which the direction is debit or a transaction debiting an account for which the direction is credit.(see line 27 page 37 to line 9 page 38 of the present Specification)

Another purpose is to allow the elimination of non appropriate parenthesis in financial statements. When a financial statement is built, positive numbers and negative numbers are not shown. What is shown is balances. According to the accounting equation, the balances on the left of the equation are debit balances and the balances on the right of the equation are credit balances. For each account, a direction is attributed 1029. The tag D is for debit and the tag C is for credit. For each item, the module uses the direction of the first account of the item to determine the direction of the item. Each total resulting of the addition of the balances of each of the accounts pointed to in the sub-list of the item 1014, is multiplied by 1 or by -1 according to the direction (D or C) of the first account of the item. A negative result for this multiplication is shown in parentheses for display purposes of the balance on the financial statement (see lines 19-28 on page 21 of the present Specification). A balance is shown in parentheses only if it is of opposite direction to the direction of the item and not if it is a credit balance or not if it is of opposite direction to the direction of a section of the financial statement or of the whole financial statement in which it is shown.

Therefore, a debit balance is shown in parentheses if the direction of the item is a credit, and a credit balance is only shown in parentheses when the direction of its item is a debit. The same principle applies for the presentation of the balances of the totals. The module uses the direction of the first account of the first item of the total to determine the direction of the total. The total of a balance for a line of type total comes from the addition of the balances of each of the accounts pointed to by the sub-list item of each of the items pointed to by the sub-list total of the total. Each total is multiplied by 1 or by -1 according to the direction (D or C) of the first account of the first item. A negative result for this multiplication is shown in parentheses for display purposes (see lines 1-14 on page 22 of the present Specification).

If Peachtree taught maintaining an accounting direction for each account, the minus sign to the right of the balance of the account 'Accumulated Depreciation' in the 'Balance Sheet' report of page 8-14 would have been eliminated since it is well known in the art that the account 'Accumulated Depreciation' is a creditor account.

Claims 44-47 were rejected under 35 U.S.C 103(a) as being unpatentable over Peachtree in view of Sampson. For at least the reasons presented herein, the rejection is traversed.

The Office acknowledges that Peachtree does not teach optimizing allocation of memory spaces. However, the Office alleges that Sampson provides such optimization. Looking at Sampson Figure 8 and 10, it is evident that the transaction data structure of Sampson is not 'reducing the number of memory spaces that must be allocated for storing transactions'. Since Sampson requires more memory spaces to create 'intermediate record' noted in Sampson Figure 8 for totals and to store the journal entries. The 'intermediate' records are added 'between' the journal entries and the accounts balances, as shown by Sampson Figure 8, with 'POINTER TO LIST OF TRANSACTION ID RECORDS' pointing to Sampson Figure 7 'entry IDs', which 'entry IDs' point to journal entries of Sampson Figure 10.

So not only does Sampson need more space for the new intermediate records, but also requires space to store the original journal entries. As noted in Sampson, the original "journal entry, complete with debit and credit, is the canonical record" and is retained by Sampson. (Sampson Col 8, lines 41-43; Col 12, lines 6-7)

As described in Sampson, "[i]n FIG. 7, there is shown a schematic representation of a chain of entry IDs, EN(1) through EN(n), identifying the original journal entries, JOURNAL ENTRY (1) through JOURNAL ENTRY (n), which share a unique design. Each of the records shown in FIG. 3 contains a pointer which begins a chain of journal entry identifiers. The "N"

field in FIG. 3 contains the number of journal records identified in the chain for each summary. (Sampson: column 13; line 66 – column 14; lines 5)

Sampson further states that “if the memory capacity is available, the journal entries can be stored, in a memory 35 connected to the computer 32, in the order defined by the chain of each design record or simply by entry number.” (Sampson: column 11; lines 44-47) And even further, “[t]he memories 33, 34 and 35 can be separate memories or a large disk storage device interfaced with the computer 32.” (Sampson: column 12; lines 61-63; See Sampson Figure 4)

Thus, it is obvious for a person of ordinary skill in the art, that Sampson does not teaches reducing the number of memory spaces that must be allocated for storing transactions, neither does it teaches optimising allocation of memory spaces for storing transactions included in the accounting data by storing debited account and a corresponding credited account in a single element of the transaction data structure, as claimed by the present invention.

Furthermore, the present invention claims the usage of “central memory” and not the disc drive or external memory described by Sampson. For at least these reasons the rejections are traversed.

In addition, claim 46 has been amended to be more specific about the theoretical balance being a theoretical account balance which should the traverse the rejection.

Claim 47 is amended to clarify the components of the LINK vector and the LINKBANK field, and for the reasons herein, the rejection is traversed.

As described in the application and in the amended claims, the present invention imports accounting data stored in an electronic file. The accounting data represents an electronic data format from any accounting system. This accounting data comprises at least an

account identification (number and/or title or description), and an amount which is represented as a debit or credit.

As illustrated in the Applicant's Figure 3, the accounting data 300 comes from any accounting software package, for example, any trial balance that is displayed in an electronic format and stored into an electronic format such as by using the 'print to file' option from a print menu that stores the data into an ASCII file. The electronic format data is stored on a computer readable medium in 302. This trial balance data stored in 302 can be read by process 303 using well-known conventional data reading techniques (see line 26 page 8 to line 3 page 9 of the present Specification). For example, the present invention can simply read the ASCII code of a trial balance report printed on disk (ASCII file) instead of paper and allocate a central memory space for each data structure element for storing this accounting data (accounts identification, balance) and link data structure elements with doubly linked lists of pointers (central memory addresses), which allow the organization and manipulation of any trial balance.

Similarly, accounting transactions listed in transactions reports and stored on a computer readable medium 306 can be similarly read using process 307 (lines 3-5 on page 9 of Specification). The invention loads this accounting data in the doubly linked transaction data structure and the associated displayline data structure element of Figure 22 and link transactions to allocation accounts, according to the account identification available on all transactions reports, with doubly linked sub-lists of displayline data structure element pointers 1030. The invention will further compute the amounts according to the accounting equation not according to mathematic sign of numbers.

Claims 12-15, 17, 20, 23-30, 34, 36-44, 46-55 are currently amended for clarification and to more succinctly claim the subject matter of the present invention.

At this point it should be evident that any accounting software, such as Peachtree for example, can integrate the current invention universal methodology for building financial statements. In some embodiment the accounting system can simply import bookkeeping data by going through the printing/reading of ASCII files, importing the data or otherwise obtaining an electronic file of the data. Also, as expressed in the Background of the invention, word processors offers all the flexibility required to produce final and complete financial statements, but word processors offer no integration with the accounting data of accounting systems.

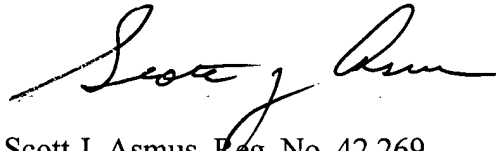
With this universal method for building financial statements providing the capacity to read, organize and manipulate the accounting data of any accounting software, word processor software such as Microsoft Word, Wordperfect, or spreadsheet software such as Microsoft Excel, Lotus 123, or editing software such as PageMaker, QuarkXpress, will be able to integrate accounting data of any accounting systems. Some accounting software systems offer the ability to save data into readable files by other software systems. The financial statement module of the present invention provides the capability to read, organize and manipulate accounting data printed to a file instead of paper by any accounting software therefore allowing other software (such as spreadsheets) to read the accounting data. It is no more the accounting software that allows the other software to read its accounting data. Rather, the other software has the capability to read the accounting data of any accounting software.

The Applicant believes that the claims as amended more distinctly define the claimed invention, and are patentably distinct from the references of record. The Applicant respectfully submits that Peachtree does not suggest or anticipate each and every limitation as now recited in the Applicant's claims. As such, the Applicant respectfully requests the Examiner to withdraw his rejection, and to allow all of pending claims 12-55 as amended herein.

Appl. No. 09/736,345
Amdt. Dated Sept. 2, 2005
Reply to Office Action of April 4, 2005

The Applicant believes the above amendments and remarks to be fully responsive, thereby placing this application in condition for allowance. Favorable action is solicited. The Examiner is kindly invited to contact the undersigned attorney by telephone, facsimile, or email for quickest resolution, if there are any remaining issues.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott J. Asmus", written in a cursive style.

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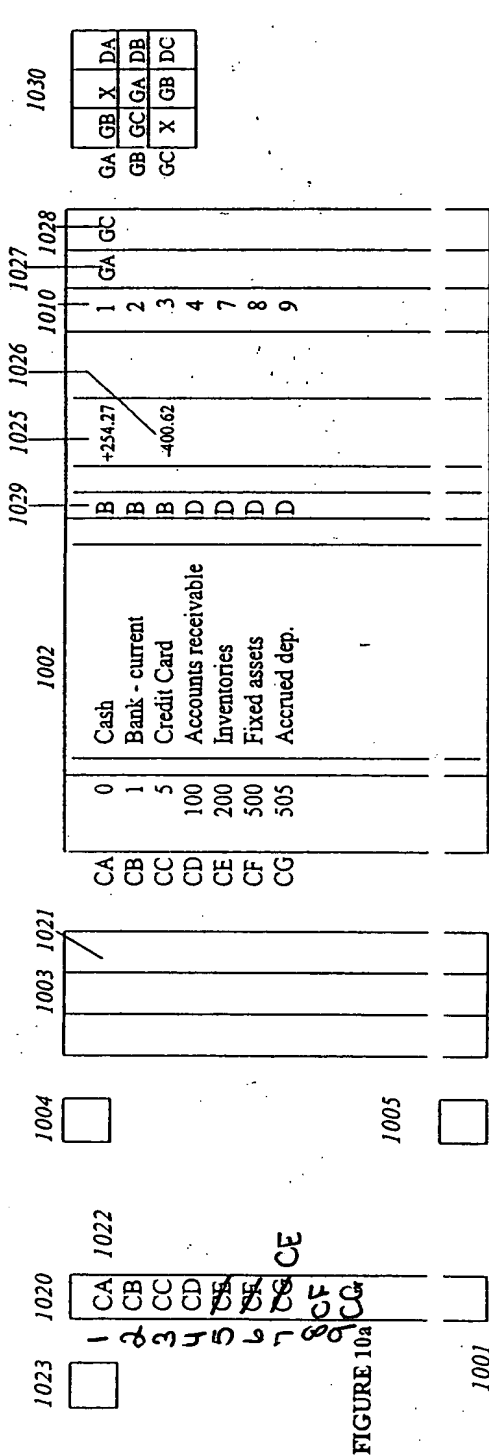


FIGURE 10a'

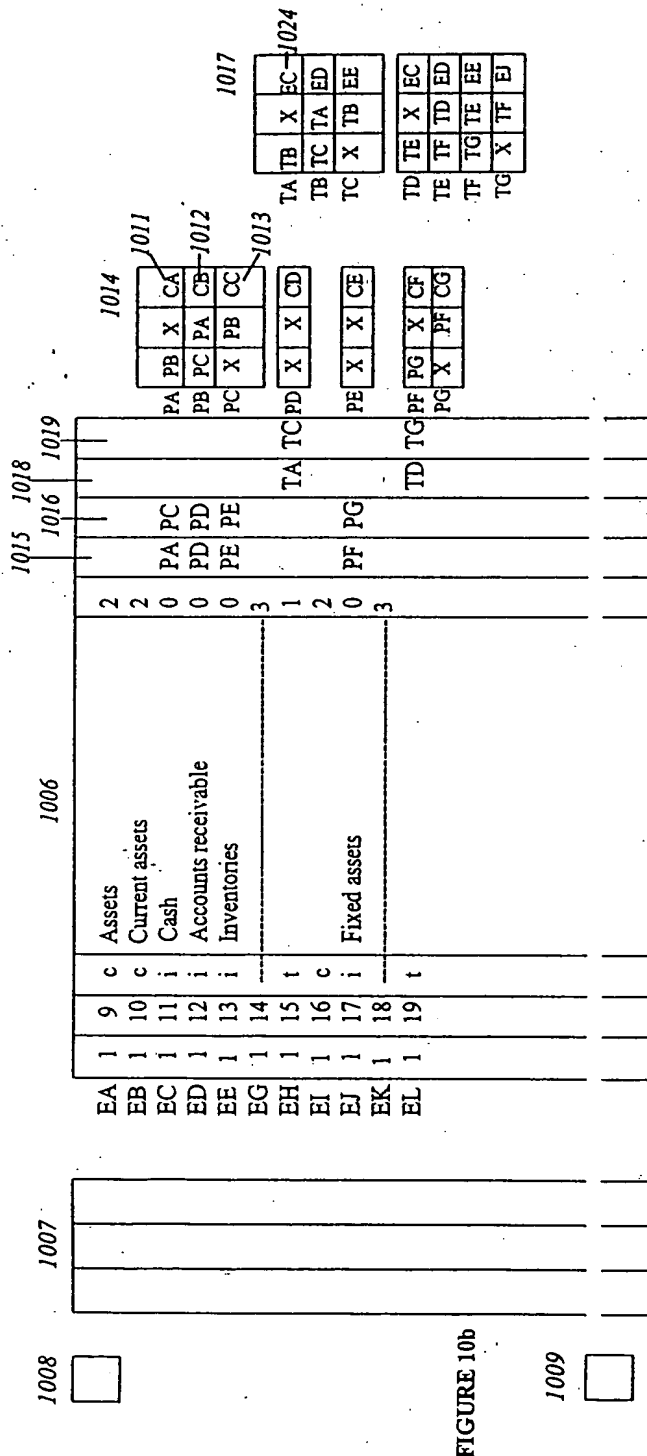


FIGURE 10b